Guidance/Navigation and Control WIPT

The Guidance/Navigation and Control WIPT facilitated extensive re-use of ERGM flight software that has resulted in a significant cost avoidance for Excalibur. It also monitors the development of the Navy's Low Cost Guided Electronics Unit (LCGEU) program, which has potential to meet guidance requirements for both ERGM and Excalibur in the future. Additionally, this WIPT pursues Global Positioning System (GPS), Inertial Measuring Unit (IMU), and anti-jam challenges and proposes common solutions. The team has also drafted common interfaces' specifications to allow interoperability of subsystems and components.

Lethality and Payload WIPT

The Lethality and Payload WIPT developed a standardized explosive recommendation process to promote the use of common energetic materials for Army and Navy gun-fired munitions. This process recently facilitated the decision to use a common energetic fill for both the ERGM and Excalibur unitary warheads, which will lead to significant cost savings during production. Other cooperative efforts include:

- Standardized defeat criteria against standard target sets developed by the Requirements WIPT.
- Standardized arena performance test procedures for both unitary and submunition warheads.
- Standardized data analysis models for the calculation of lethal areas used to support Joint Munitions Effectiveness Manual (JMEM) revisions.
- Developing common payload fuzing for ERGM and Excalibur that will lead to reduced cost in production.

Business Case WIPT

The Business Case WIPT has developed Business Case models and tools to conduct cost-benefit analyses for component/sub-component commonality, and is developing strategies for future competitive procurement. They have also conducted Common Fill analyses (in conjunction with the Lethality and Payload WIPT) and determined cost benefits to the programs. The WIPT is currently coordinating common Foreign Military Sales (FMS) policy for guided projectiles.

The most recent all-up round ERGM live-fire test of June 25, 2002, at White Sands Missile Range (WSMR) was a major milestone for Naval Surface Fire Support (NSFS) and all guided projectile programs. The ERGM round was fired at tactical launch pressure; all flight systems survived the 10,100 G (gravity force) gun launch and performed superbly. The round guided to the target 38.5 Nautical Miles down range (WSMR range constraints precluded longer range) to an accuracy of 4 meters.

Using the GPS/Inertial Navigation System for flight control and navigation, ERGM successfully acquired the maximum number of satellites, thereby producing terminal accuracy well within ORD requirements. ERGM remains on track for full land-based testing starting in fiscal 2003, and Initial Operating Capability (IOC) in fiscal 2006.

The primary goal of the Army and Navy Guided Munition Commonality efforts remains to provide the most capable and affordable guided munitions to the warfighter. As such, this dual-Service commonality initiative and cooperative organizational structure may serve as a model for future acquisition programs.

Editor's Note: Hause and Grassano welcome comments on this article. Contact Walmanjp@navsea.navy.mil.

New DAU Training Site Opens at TACOM

A ribbon cutting ceremony held on Aug. 13, 2002, officially opened the new DAU training site, located with the Army Tank–Automotive & Armaments Command in Warren, Mich. The new training site is an element of the DAU Midwest Region, which has its main campus at Wright–Patterson Air Force Base, in Dayton, Ohio. From left: Chris Paden, DAU TACOM Site Director; Army Col. Ronald Flom, DAU Commandant; Richard Bradley, Director, TACOM Learning Center; and Gerald Emke, Dean, DAU Midwest Region.

Photo by Margaret Compton